

NOVADURAN™ 5010G45

Polybutylene Terephthalate

Mitsubishi Engineering-Plastics Corp

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

GF-Reinforced / HB, Standard, GF 45%

General

| | |
|-----------------------------|--|
| Material Status | • Commercial: Active |
| UL Yellow Card ¹ | • E53664-101273117 |
| Search for UL Yellow Card | • Mitsubishi Engineering-Plastics Corp • NOVADURAN™ |
| Availability | • Africa & Middle East • Asia Pacific • Europe • Latin America • North America |
| Filler / Reinforcement | • Glass Fiber, 45% Filler by Weight |
| Features | • General Purpose |
| Uses | • Automotive Applications • Automotive Electronics • Electrical/Electronic Applications • General Purpose |

| Physical | Nominal Value Unit | Test Method |
|--|-----------------------------|-----------------|
| Density | 1.67 g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (250°C/5.0 kg) | 15.0 cm ³ /10min | ISO 1133 |
| Molding Shrinkage | | Internal Method |
| Across Flow : 2.00 mm | 0.90 % | |
| Flow : 2.00 mm | 0.40 % | |
| Water Absorption (Saturation, 23°C) | 0.060 % | ISO 62 |

| Mechanical | Nominal Value Unit | Test Method |
|-------------------------------|--------------------|-------------|
| Tensile Modulus | 15000 MPa | ISO 527-2/1 |
| Tensile Stress (Break) | 165 MPa | ISO 527-2/5 |
| Tensile Strain (Break) | 2.0 % | ISO 527-2/5 |
| Flexural Modulus ³ | 14500 MPa | ISO 178 |
| Flexural Stress ³ | 260 MPa | ISO 178 |

| Impact | Nominal Value Unit | Test Method |
|---|----------------------|-------------|
| Charpy Notched Impact Strength (23°C) | 14 kJ/m ² | ISO 179 |
| Charpy Unnotched Impact Strength (23°C) | 60 kJ/m ² | ISO 179 |

| Thermal | Nominal Value Unit | Test Method |
|-----------------------------|--------------------|-------------|
| Heat Deflection Temperature | | |
| 0.45 MPa, Annealed | > 220 °C | ISO 75-2/B |
| 1.8 MPa, Annealed | 209 °C | ISO 75-2/A |
| Melting Temperature | 224 °C | ISO 11357-3 |
| CLTE | | ISO 11359-2 |
| Flow : -30 to 35°C | 1.5E-5 cm/cm/°C | |
| Flow : -30 to 120°C | 1.5E-5 cm/cm/°C | |
| Flow : 35 to 120°C | 1.0E-5 cm/cm/°C | |
| Transverse : -30 to 35°C | 6.8E-5 cm/cm/°C | |
| Transverse : -30 to 120°C | 1.0E-4 cm/cm/°C | |
| Transverse : 35 to 120°C | 1.3E-4 cm/cm/°C | |
| RTI Elec (0.75 mm) | 75.0 °C | UL 746 |
| RTI Imp (0.75 mm) | 75.0 °C | UL 746 |
| RTI Str (0.75 mm) | 75.0 °C | UL 746 |



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| Electrical | Nominal Value Unit | Test Method |
|----------------------------------|--------------------|-------------|
| Surface Resistivity | 5.0E+16 ohms | IEC 60093 |
| Volume Resistivity | 2.0E+16 ohms·cm | IEC 60093 |
| Electric Strength | | IEC 60243-1 |
| 1.00 mm | 28 kV/mm | |
| 2.00 mm | 25 kV/mm | |
| Dielectric Constant (1 MHz) | 3.40 | IEC 60250 |
| Dissipation Factor (1 MHz) | 0.016 | IEC 60250 |
| Comparative Tracking Index (CTI) | PLC 1 | UL 746 |

| Flammability | Nominal Value Unit | Test Method |
|--------------|--------------------|-------------|
| Flame Rating | | UL 94 |
| 0.75 mm | HB | |
| 1.5 mm | HB | |
| 3.0 mm | HB | |

| Injection | Nominal Value Unit |
|------------------------------------|--------------------|
| Drying Temperature - Hot Air Dryer | 120 °C |
| Drying Time - Hot Air Dryer | 5.0 to 8.0 hr |
| Rear Temperature | 240 °C |
| Middle Temperature | 245 °C |
| Front Temperature | 255 °C |
| Nozzle Temperature | 255 °C |
| Mold Temperature | 80 to 100 °C |
| Injection Pressure | 20.0 to 150 MPa |
| Injection Rate | Moderate-Fast |
| Screw Speed | 80 to 120 rpm |

Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.

³ 2.0 mm/min



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Where to Buy

Supplier

Mitsubishi Engineering-Plastics Corp

, Japan

Telephone: +81-463-21-8610

Web: <http://www.m-ep.co.jp/>

Distributor

Chase Plastic Services, Inc.

Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here: <http://www.chaseplastics.com/contact/locations>

Telephone: 800-232-4273

Web: <http://www.chaseplastics.com/>

Availability: North America

Nexeo Solutions - Europe

Nexeo Solutions is a Pan European distribution company. Contact Nexeo for availability of individual products by country.

Telephone: +34-93-480-9125

Web: <http://www.nexeosolutions.com/>

Availability: Belgium, Bulgaria, Czech Republic, France, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Russian Federation, Slovakia, Spain, United Kingdom

The Materials Group

Telephone: 616-863-6046

Web: <http://thematerialsgroup.com/>

Availability: North America

